### **NOAA P-3 Hurricane Awareness Tour**







Credit: Dennis Feltgen/NHC

## Friday, May 6<sup>th</sup>, 2011



## NOAA 2011 P-3 Hurricane Awareness Tour Stops in Fort Lauderdale!

This year's Hurricane Awareness Tour will take the NOAA P-3 plane to five cities along the Atlantic coast of the United States, including Fort Lauderdale! Here's a listing of the five stops along the tour:

Falmouth, MA.
Patuxent Naval Air Station, MD.
May 3
Cherry Point Marine Air Station, NC.
May 4

• Savannah, GA.
• Ft. Lauderdale, FL.

The Fort Lauderdale stop will feature tours of the P-3 aircraft for students and the general public, as well as static displays and exhibits from the National Weather Service's Miami Forecast Office, NOAA's Atlantic Oceanographic and Meteorological Laboratory, Broward County and City of Fort Lauderdale emergency management departments, Broward County Schools, Florida International University and the American Red Cross.

Students and the public will have opportunities to ask questions and to interact with the crew of the P-3 and NWS meteorologists.

#### **General Public Tours of the NOAA P-3 Hurricane Hunter:**

Friday, May 6, 2011
3:00 p.m. to 4:30 p.m.

Fort Lauderdale Executive Airport
6000 NW 21 Ave
Fort Lauderdale, FL 33309

**NOTE:** Parking is limited and car-pooling is encouraged.

For more information, contact Robert Molleda at Robert.Molleda@noaa.gov

### P3 Hurricane Hunter Quick Facts



The P3 aircraft flies at an altitude of between 1,000 and 10,000 feet while going through a storm. A crew of pilots, navigators and meteorologist on board the plane collect important data from the storm.

May 5

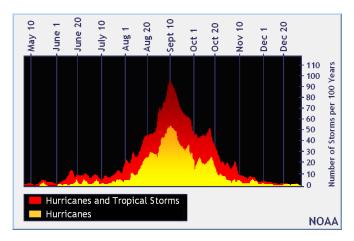
May 6

- The P3 is on standby or used for hurricane research and reconnaissance 120 days each year, and flies about 300 to 400 hours a year.
- The P-3 flies an "alpha" pattern through the storm, entering and exiting the storm through 4 legs. As it penetrates through the four different parts of the storm, the P-3 crew drops several meteorological instruments called dropsondes (see image below) which collect temperature, humidity and pressure data as it descends toward the ocean surface.
- Data from the hurricane hunter dropsondes give meteorologists at the National Hurricane

Center and local National Weather Service offices very important information on the winds and pressure of a tropical storm or hurricane. This information is critical to an accurate forecast which can help save lives and property.



# South Florida is Hurricane Country We Need To Be Prepared!



Hurricane season is from June 1st to November 30<sup>th</sup>. The above image shows that August, September and October are the most active parts of hurricane season.

Why does South Florida get hit so often? It's geography. Florida is located in the

We live in the most hurricane-prone part of the United States. This means that more hurricanes have hit South Florida than any other part of the country. This also means that we need to be ready every hurricane season in case a storm heads in our direction.



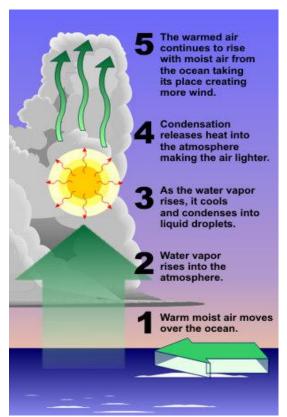
"subtropical belt", which is the area of the world where tropical storms and hurricanes frequently travel. Florida is also a peninsula, which means that we are surrounded by warm water on three sides (Atlantic Ocean to the east, Gulf of Mexico to the west and the Straits of Florida and Caribbean Sea to the south).

On average, a hurricane has at least indirectly affected South Florida every 4 years, and a direct hit about once a decade. The last hurricane to hit South Florida was Hurricane Wilma in October of 2005.

Tropical storms and hurricanes bring more than just wind. They can bring very heavy rainfall which produces flooding, storm surge which brings sea water well inland and even tornadoes. When preparing for a storm, keep in mind all of these hurricane hazards.

The most important part of preparing for a storm is to have a **family hurricane plan** before the start of hurricane season. Good hurricane plans can be found online at broward.org/hurricane, redcross.org and floridadisaster.org

### **How Do Hurricanes Form?**



As the graphic shows, hurricanes need warm and moist air from the ocean below to help form the clouds that make up the storm. The warmer and moister the air is, the lower the pressure in the developing storm. The low pressure is what makes the air spin around the storm and form the "eye" of the hurricane. The lower the pressure, the stronger the wind is around the eye of the hurricane.

Tropical cyclones are given a category classification based on the highest winds in the storm. The three stages or categories of a tropical cyclone are: Tropical Depression, Tropical Storm and Hurricane. The Saffir-Simpson Scale below shows the different categories of a tropical cyclone.

SAFFIR-SIMPSON SCALE			
	WINDS		PRESS
CAT	(MPH)	(KTS)	(MB)
TD	to 39	to 34	
TS	39-74	34-64	
1	74-95	64-83	to 980
2	96-110	84-96	965-979
3	111-130	97-113	945-964
4	131-155	114-135	920-944
5	>155	>135	>920

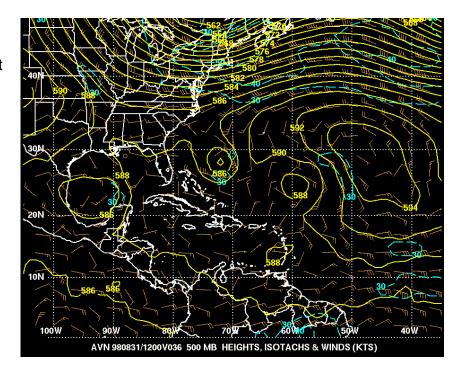
### **Forecasting Tools**

Meteorologists use a variety of tools to track and forecast tropical storms and hurricanes. In addition to the hurricane hunter planes, meteorologists use satellite data to monitor the location of weather systems over a large part of the earth, weather observing stations from airports, ships and buoys, as well as Doppler radar data.



The data from all these sources are put into computer models of the atmosphere that assist forecasters in determining where a storm will go.

The computer models show meteorologists the potential location of weather patterns that steer tropical storms and hurricanes. These models give forecasts for up to 2 weeks, although the actual hurricane track and intensity forecast is only for 5 days. The farther out in time, the less accurate the computer models are in predicting the location of weather patterns.



### **Useful Web Sites**

Here are some useful web sites to check out before and during hurricane season:

**NOAA's National Weather Service:** www.weather.gov **NWS South Florida Forecast Office:** http://weather.gov/southflorida www.hurricanes.gov/prepare **Hurricane Preparedness Week: National Hurricane Center:** www.nhc.noaa.gov **NOAA's National Hurricane Center:** www.hurricanes.gov www.Ready.gov Federal Emergency Management Admin, FEMA: http://aoc.noaa.gov **NOAA's Aircraft Operations Center:** www.hurricanehunters.com Air Force Hurricane Hunters:

Jet Stream – An Online Weather School:

Visit us online at weather.gov and on Facebook: http://www.facebook.com/US.National.Weather.Service.Miami.gov

### **Partner Web Sites**

City of Fort Lauderdale
Fort Lauderdale Executive Airport
Fort Lauderdale Police Department
Fort Lauderdale Fire Rescue
American Red Cross South Florida Region
FIU International Hurricane Research Center
Broward County Emergency Management

http://fortlauderdale.gov www.fortlauderdale.gov/FXE http://www.flpd.org www.fortlauderdale.gov/fire-rescue www.southfloridaredcross.org www.ihc.fiu.edu www.broward.org/Emergency

www.srh.noaa.gov/jetstream